

servations on a large series of these cestodes, it is concluded that once contact is established between the cirrus and vagina, separation may not often occur. Both intersegmental and interstrobilar copulation were recognized, and in the case of the latter, apparently as a result of manipulation when the worms were removed from the host, it was commonly seen that either the vagina or cirrus was torn completely free from the segment. This resulted in the two organs remaining tightly attached (Fig. 15).

This cestode was frequently observed in Oregon shrews and was one of the common species, along with *H. macyi* and *H. kenki*.

DISCUSSION

The description of the four species of cestodes here brings the total number of species recorded from North American shrews to 11. All the North American species are well characterized and can be readily differentiated. It would appear that the species of *Hymenolepis* parasitic in North American shrews have evolved quite separately from those found in the Eurasian mammals, since no Eurasian species has so far been recorded from North America. When more nearly complete information has been obtained there may be derived from it some under-

standing of the zoogeographically important implications which are involved.

SUMMARY

Seven species of cestodes have been recorded from Oregon shrews (*Sorex v. vagrans* Baird). Of these, *Protogynella blarinae* Jones, 1943, *Hymenolepis falculata* Rausch and Kuns, 1950, and *H. schilleri* Rausch and Kuns, 1950, are recorded here for the first time from the western part of North America. Four species of *Hymenolepis*, *H. macyi*, *H. kenki*, *H. sphenomorphus*, and *H. intricatus*, are described as new.

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ORNITHOLOGY.—*The long-tailed sugarbird of eastern Rhodesia*.¹ HERBERT FRIEDMANN, U. S. National Museum.

In his second paper on the birds of Gazaland, Swynnerton (Ibis, 1908: 31-32) recorded the Natal long-tailed sugarbird from the scrub-grown kloofs of the Melsetter District, extreme eastern Southern Rhodesia, and remarked that the bird was previously unknown north of the Limpopo, being recorded only from Natal, Swaziland, and the Transvaal. However, some eight years earlier Stark (*Fauna of South Africa, Birds*, **1**, 273. 1900) included Gazaland in the range of the species, although on what basis he did so is a mystery as there appear to be no published records prior to Swynnerton's. Indeed,

several authors, such as Shelley and Reichenow, who refer to Stark's book, give the distribution of the species merely as Natal, Zululand, and the Transvaal, and either overlooked or doubted the stated occurrence in Gazaland. Since Swynnerton's day no notable extension of range has been reported for the bird in spite of very considerable work in eastern parts of the Union of South Africa, Southern Rhodesia, and Portuguese East Africa. It appears, then, that the bird has a very discontinuous range, which, in light of present knowledge, may be stated as from Pondoland in the eastern Cape Province, through Natal, Zululand, Swaziland, and the Drakensberg Mountains north to the Zoutpansberg area of the eastern Transvaal, and then again, after a long geographic gap of at least 200 miles of unsuitable

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country, in the Melsetter District of Southern Rhodesia, near the Portuguese border.

Populations that are strikingly isolated geographically frequently reveal morphological characters worthy of nomenclatural recognition, and I was interested to examine and to compare Melsetter *Promerops* with others from eastern South Africa. When in Southern Rhodesia in 1950 I was able to acquire from Capt. Cecil D. Priest a number of birds he had obtained some years earlier in Gazaland, and among them was a fine adult male *Promerops*. Through the kindness of Reay H. N. Smithers, two additional examples (adult females) from Rocklands, in the Melsetter area, in the collections of the National Museum of Southern Rhodesia, have been made available to me for study. These three birds have been compared carefully with six examples of typical *gurneyi* from Natal and the northeastern Transvaal, and prove to represent a readily distinguishable race, which may be known as

Promerops cafer ardens, n. subsp.

Type.—U.S.N.M. no. 433386, ad. ♂, collected at Melsetter, Southern Rhodesia, May 13, 1939, by Cecil Damer Priest; orig. no. 290.

Subspecific character.—Similar to *Promerops cafer gurneyi*, but with the pectoral band conspicuously brighter and darker—between Hazel² and Mikado Brown, as opposed to Sayal Brown in *gurneyi*, with the rump and upper tail coverts less yellowish, more greenish—dusky Warbler Green as compared with Pyrite Yellow in *gurneyi*, with the upperparts generally darker, the centers of the feathers blacker—Chaetura Black (Fuscous in *gurneyi*), the cheeks darker—dusky Olive Brown (Drab in *gurneyi*), the tail feathers darker, the median ones more blackish below than in *gurneyi*, and the streaks on the sides and flanks are more blackish, less brownish than in the birds of the highlands of Natal and the northeastern Transvaal. An adult male from Woodbush, northeastern Transvaal, agrees with topotypical *gurneyi* from Natal in all the color characters. There seem to be no significant differences in dimensions between the two races, although not enough specimens have been available for measurement to be certain. The measurements of the type of *P. c. ardens* are wing 92, tail 170, culmen from the base 31.8, exposed culmen 26.2;

tarsus 19.6 mm. The two females measure—wing 80, 88.2; tail 115+, 148+, culmen from the base 29, 29.7; exposed culmen 26, 27; tarsus 21, 22 mm.

Darrel C. H. Plowes, who knows the habitats of both the Natal-Transvaal race and the Melsetter form, has kindly supplied me with some pertinent facts about them. He tells me that in parts of Melsetter *Brachystegia* is the dominant tree with the *Proteas* being secondary, whereas in the Transvaal *Brachystegia* is absent. The ecological differences between the Transvaal section of the Drakensberg, and the Chimanimani Mountains in the Melsetter area have resulted in a number of endemic forms being found in the latter area, to which number the new *Promerops* is the latest addition.

Plowes noted *Promerops* was not uncommon around Melsetter village, though only rarely seen on the Martin Forest Reserve, an area of some 25,000 acres to the north and northeast. The birds were very common in the *Protea-Brachystegia-Phillipia* scrub on "Gwendengwe," some 15 miles to the east, and do not seem to stray far from this botanical complex.

There has been some discussion in the literature as to whether all the forms of *Promerops* are conspecific or if *cafer* is one species and *gurneyi* (with *ardens*) another species. It is true that *cafer* differs in having a very much longer tail and in lacking the rufous to a large extent on the crown, and, on the breast as well, but in habits the two groups are said to be alike, and geographically they do replace each other, i.e., they are representative forms. Final solution of this problem must wait until someone with adequate material from all parts of the range of the whole group and with sufficient data on their habits makes a comprehensive study. It is relatively seldom that one finds two closely related birds that show such marked morphological differentiation apparently unaccompanied by any differences in habit. The opposite condition—slight morphological differences coupled with considerable divergences in habit is much more frequent, as for example, in congeneric species of African pipits (*Anthus*) and grass warblers (*Cisticola*) or American tyrant flycatchers (*Empidonax*).

² Capitalized color terms *ex* Ridgway, *Color standards and color nomenclature*.